

II 1934

1934-II.

Lyon Co.  
Hawarden.  
Diamond Lake.  
Gull Pt.

421.9  
430.7  
same

Note Book

No. 188



B. Shinnick - Iowa City, Ia. 512 Brown str.  
gas - Rock Rapids 1.16

Exp.	0
#9 + #32	3.9
Little Sioux Riv	7.5 1/2
Loke Park Wm	11.0 1/2
Hanging log road	13.3
Co. line	14.2
Ocheyedan road	21.5
Road (#21)	26.9
Sibley (- 2 R.R.s)	33.7
Co. line (Lyon)	39.1 1/2
Little Rock turn	42.0
Rock Rapids (River)	56.1
#75 " "	56.6 1/2
Lester (R.R.)	64.3
Lakewood (R.R.)	70.7
State line	75.5 1/2
E. So. & ex. from	80.2
Granite mts.	86.5
Park	81.7

Gas - 1.68



Aug. 22, 1934 - Wed.

We left at about 8:15 AM, from  
Lab, and reached the Lyn Co  
park at about 10:30.

They are building a shelter -  
house in SW. part & are cutting  
into ledges for road. C.C. camp.

They have also criss crossed  
the whole area with roads  
(trails) & the park is evidently

turned into a recreational affair.

And all this chiefly for the  
benefit of Hot Falls!

I first worked the top of the  
plateau on the ledges, then  
along Big River & low plain N. of  
gopher pool.

Headache, much. Lost my field-  
glass.

It had evidently been very dry  
earlier, & the effect is clear.

On upper, Ar. P. part.

Quercus muhlenbergii - small tree E. edge  
a small canyon to.  
silene (various)

ambrosia artemisiifolia fl.

Monticola oregonensis fr. fl.

Panicum virgatum fr.

Monticola oregonensis fr. fl.  
Chenopodium

Verbena stricta fr. fl.

Rosa pratincola fr.

Silene acaulis

Eragrostis megastachya

Chrysopsis fl.

Euphorbia corollata? fl.

Acerola - fr.

Cyperus - fr.

Portulaca - fl.

Panicum capillare fr.

Aristida grandiflora fr. few

Oxybaphus myrsinifolius fl. sp.

Euphorbia heterophylla fl.

Andropogon scoparius fl. patches - fr.

" fr. center fl. - patches "

Grindelia squarrosa - fr. fl.

Symphoricarpos occidentalis fr.

Petalostemum purpureum fr. scab.

Potentilla arguta fr. scab.

Kuhnia euphratica - fr. fl. - fr.

Lepachys columbiana fr. com.

Acerola v. fr. v. laevigata fr. few

31 Artemisia ludoviciana fr. com.



- 32 - *Lepidium albidum* fr.  
*Zinnia parviflora* fr.  
*Panicum* (Pino) fr.  
*Opuntia pauciflora* fr.  
*Allium stellatum* fl. out.  
*Proserpinaca angustifolia* fr. out.  
*Cirsium canescens* fl. out.  
*Aster multiflorus* fl. com. bud.  
40 *Amaranthus graecus* fl.  
*Salicaria canadensis* fr. bud.  
*Setaria glauca* fr.  
*Chrysopsis heterophylla* fr. bud.  
*Achillea millefolium* fr.  
*Sporobolus heterophyllus* fl. fr.  
*Muhlenbergia* fl.  
*Salicaria nemoralis* fl. 5-6  
*Hemichloa bispurva* fl. out.  
*Trisetum gramineum* fl. out.  
50 *Lithospermum angustifolium* fr. out.  
*Helianthus scaberrimus* com.  
*Rubus occidentalis* fl. few.  
*Samolus purpureus* fl. com.  
*Aster multiflorus* fr. bud.  
*Oxybaphus hirsutus* fl. out.  
*Sorghastrum nutans* fl. out. short.  
*Liriodendron latifolium* fl. out.  
*Rhus typhina* fl. few.  
*Liatris scariosa* fr. out.  
60 *Salicaria americana* fl. com. fr. bud.  
*Salicaria americana* fl. com. fr. bud.  
*Salicaria americana* fl. com. fr. bud.  
*Salicaria americana* fl. com. fr. bud.  
*Salicaria americana* fl. com. fr. bud.

- 66 *Equisetum* fr. com.  
*Salicaria americana* fl. com. fr. bud.  
*Helianthus scaberrimus* fl. com. fr. bud.  
*Chrysopsis heterophylla* fr. bud.  
70 *Brauneria angustifolia* fr. out.  
*Aster multiflorus* - small.  
*Erigeron* " 1-2 fr.  
*Polygonum ramosissimum* fl. out.  
*Isanthus scaberrimus* fl. out.  
*Synedrella nodiflora* fl.  
*Polygonum convolvulus* fr.  
*Anemone cylindrica* fr. out.  
*Carotus minima* fl. out.  
*Panicum Scribneri* fr. bud.  
80 *Woodia virginica* fr.  
*Rubus grandis* fl. edge fr.  
*Rubus* fr. out.  
*Cirsium chloranthum* fl. few.  
*Helianthus scaberrimus* fr. out. (edge)  
*Ambrosia psilostachya* fl. com.  
*Anemone v. wachneri* fl. out.  
*Liatris pycnostachya* fl. out.  
*Iva xanthioides* fl. few.  
*Lactuca ludoviciana* fr. few.  
90 *Sporobolus cryptanthus* fl. few.  
*Onoserotum occidentale* fl. few.  
*Veronica erythrorhiza* fl. few.  
*Erigeron ramosus* fl. few.  
*Ampelopsis 5-lobata* fl. few. (edge)  
*Benthamia pycnostachya* fr. few. 1-2 fr.  
*Oxybaphus* fr.  
*Erigeron* fr. few.  
*Hesperis matronalis* - fr. few.  
*Echinocloa corymbosa* fr. few.  
100 *Erigeron* fr. few. on ledge



101- Polygonum commutatum lf. ser. lvs  
 Polygonum tenue fr. fr.  
 Carex "fastuosa" old. ser.  
 Gonolobus semulata fl. fr. fr.  
 Asclepias syriaca old. fr. fr.  
 Muhlenbergia fr.

The Prunella sp. has two  
 shrubs with flowers. On E. side  
 of Jasper Pool.

Salix was found until  
 about 3:00 PM. & then the  
 pretty red flowers appeared  
 everywhere.

Lilia amara fr. Leage →  
 Smilax herbacea fr. "  
 Xanthoxylum fr.

Lower, along Big River

Salix serotina fl.  
 Rubus coccineus fl.  
 Agropyron juncea fl.  
 Vicia cracca  
 Acer negundo  
 Quercus alba  
 Vitis vulpina  
 Lactuca ludoviciana fr. fr.  
 " serotina fl. fr.  
 Eryngium yuccifolium fr.  
 Artemisia ludoviciana fr.  
 Stachys flava  
 Iva xanthica fl.  
 Amaranthus blitoides fl.  
 Salix serotina  
 Rosa virginiana? fr.  
 Potentilla norfolkensis fl.  
 Vernonia paniculata fr.

Pool  
 Helianthus annuus fl. com.  
 " prostratus fr. com.  
 Euphorbia corollata fl. com.  
 Amaranthus tuberosus fl. com.  
 Rumex crispus fr. fr.  
 Helianthus scaberrimus fl. fr.  
 Cirsium arvense fl. fr.  
 Polygonum hydropiperoides fl. edge of pool.  
 Salix amygdaloides fr. pool  
 Eryngium yuccifolium fl. fl. bank low



E. ledge

*Bonteloua hirsuta*  
*Sporobolus brevifolius*? fl. yw  
" *crystallinus* fl. yw  
*Artemisia canadensis* fl.  
*Chrysopsis* fl.  
*Bonteloua alysoides*  
*Stylosanthes tenuis*  
*Zalium purpureum* fl.  
*Verbena stricta* fr.  
*Polygonum ramosissimum* fr.  
*Isanthus candelarius* fr.  
*Ammannia gracilis* fl.  
*Euphorbia maculata* fl.  
*Plantago Purshii* fl.

We visited the exposure 2 mi.

E. & found it badly partitioned

We stopped at Rock Rapids

for supper and then drove back  
to the Lab.



Milford - gas. 1.04 gas oil .83  
 Harwarden - supper 1.68  
 oil + gas 1.61  
 Lake Park dinner 8/25 72  
 8/26 Saco's gas oil 1.62 Milford  
 Hampton - dinner 72  
 Shell Rock - gas, oil 2.28

1914 22 1 hr 44.2 - 1159.

Aug. 24, 1934 Fri.

Left at 12:59 PM.

Lab. 0.

#9 3.9  
Lake Park road 11.1

Bug road 13.3

Co. line. 14.3

RR. (Rush Lake) 20.1

Ocheyedan road 21.5

Sibley 33.7

Co. line (Lyon) 39.1

Little Rock rd. 41.9

Rock Rapids (inn) 56.1

Lester 64.3

Larchwood RR. 70.7

State line 75.6

8. exp. for Q. 88.2

Park. 81.8

Return

Live State line 88.9

Larchwood (RR.) 93.8

Live #9-S. #26 95.2 1/2

Inwood RR. 104.1

#18 104.2

Co. line (Lyon) 107.1 1/2

Live #18. 111.1 1/2

Hudson corner 115.6

Rock River 120.0

Lyon 122.0

from 123.0

Back to road 124.2

Harwarden 130.6

#75 146.2

Sioux center

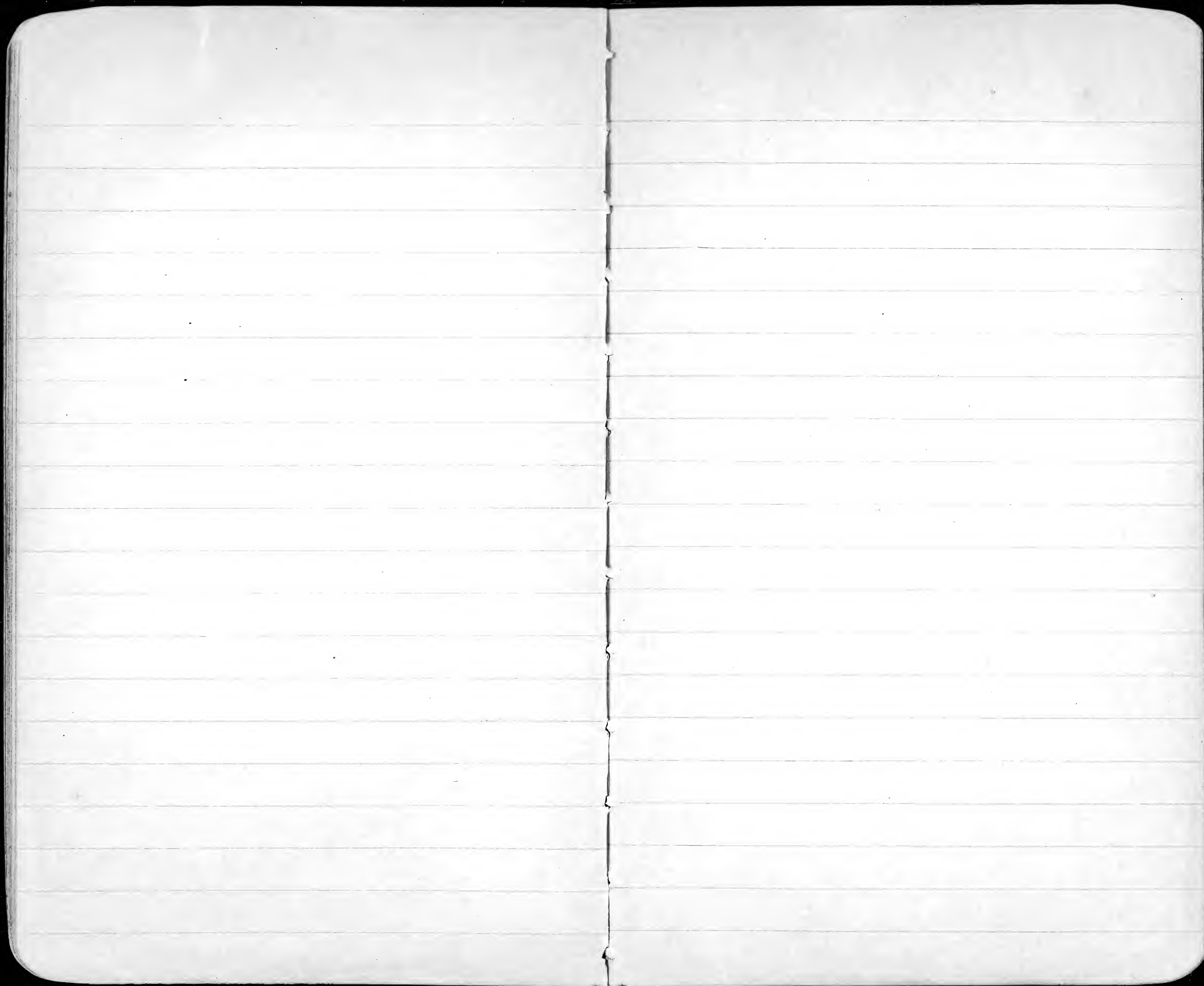
#18. 159.1

#71 210.2

Milford 220.5

Lab. 225.9







Prærie S of Diamond Lake (on road)

*Helianthus scaberrimus* fl  
*Rhus glabra* fr  
*Aster multiflorus* fl  
*Aster multiflorus* fr  
*Solidago v. angustata* fr  
*Silene maritima* fr

*Andropogon furcata*  
*Liatris scariosa* fr fl  
*Lupinus albus* fr  
*Rhus v. corymbosa* fl  
*Verbena stricta* fr  
*Aster multiflorus* fr  
*Petalostemum candidum* fr

*Rosa pratincola* fr  
*Solidago rigida* fl - fl  
*Petalostemum purpureum* fr  
*Andropogon scoparius* fr  
*Panicum scribneri*  
*Solidago nemoralis* fl

20 *Solidago canadensis* fl fr (more lower.)  
*Aster laevis* fr  
*Helianthus maximiliani* fr fl

*Brauneria angustifolia* fr  
*Sporobolus brevifolius* fl (near here)  
25 *Astragalus canadensis* fr

*Helianthus scaberrimus* fr  
*Solidago nemoralis* fl fr  
*Aster multiflorus* fr  
*Lygodesmia juncea* fr  
*Cercocarpus palmata* fr



- 31 Comandra  
 Lepachys frumosa fl. & fr. sc.  
 Aceria v. lanceolata lf.  
 Aster aciculatus lf.  
 35 Artemisia ludoviciana bud  
 Ceanothus am. fr. (low)  
 Pisonia aculeata fr.  
 Allium stellatum fl. (low)  
 Ranunculus repens fr. "  
 Monarda mollis lf. "  
 Polygonum fl. (low) (suffr.)  
 Lactuca ludoviciana fr. 1 (low)  
 Asclepias syriaca lf. "



Mileage 2.7  
 1st 10.15 - 7.7  
 2nd 11.15 48.9  
 3rd 12.15 92.9

4th 1.15 - 135.6

Ans 158.1 1/2 Ocean  
 160.2 - West Fork River

Sunday, Aug. 26, 1934

Left at 9:23 am.

25995

Lab. gate 0  
 Milford 10:15 7.7  
 Spencer TR. 20.7 1/2  
 Turn E. 22.0  
 Dickens (road) 27.9 1/2  
 Co. line (road) 33.5  
 Ruthven 34.3  
 #17 41.2  
 Emmetsburg, #17 - 45.9 1/2  
 Cylinder (road) 53.9 1/2  
 Co. line 59.4  
 Whittier road 60.3 1/2  
 Algona W. 169 69.6 1/2  
 " E - 70.6 1/2  
 Sexton 76.9  
 Wesley 81.8 1/2  
 Co. line 83.5  
 Hutchins 88.2  
 Britt Ill. 92.3  
 Eagle Lake road - 95.3 1/2  
 Duncan 97.0  
 #15 (W. of town) 101.7  
 Kemp road 108.0 1/2  
 Goodrich 114.1  
 Co. line 115.1  
 Belmont 119.3  
 #10 126.0  
 " 126.1 1/2  
 Rowan 129.3  
 Co. line (Franklin) 132.0  
 Coulter Road 138.4

Hampton 246.6  
 #65 142.0 1/2  
 Co. line (Ruth) 156.3  
 Dismal 159.1  
 Allison road 167.8  
 Shell Rock 180.3  
 Co. line (Ruth) 181.8  
 #218 185.4  
 Waverly, #10 + 218 186.3  
 River 186.6  
 (road) 186.7  
 #59 193.5 1/2  
 Redlyn road 199.1  
 Co. line 206.4  
 #11 214.7 1/2  
 " 214.8 1/2  
 Delmar - #10 + 11 217.2 1/2  
 Co. line 219.6  
 Hazelton 221.5  
 RR 223.9  
 Ingersoll 232.4  
 RR 236.1  
 Road 239.5  
 Co. line 244.1  
 #101 244.9  
 Co. line 247.0 1/2  
 Walker 250.3  
 Center 256.4  
 Louisa 269.9  
 Co. line B. W. 272.9 1/2

Stopped at Gull Pt. & collected  
 more track material (see list)  
 for Woodcock's case.

A beautiful clear day  
 We drove to Spencer & E. on #18  
 to Garner. now

27461 #30

27441 4



2 blocks N. of

Expenses

Aug. 11. Gas, oil, 10 gal. - 1.80  
 Aug. 12. Hotel, Waukegan 10  
 Fire, gas, oil, 25, crane mail 22  
 Salesville, Wis. Supper 80  
 Aug. 13. La Crosse - room 2.00  
 gas - Pr. du Chien 1.94 + 8  
 Toll - Dubuque 1.55 9.49  
 Supper 30  
 Aug. 14. Hotel 1.50, Supper 11 - Bellevue 10 91  
 Toll, Sabula 30  
 Lunches - Clinton 72  
 Post Regm - gas 10 gal. 1.85

Trip To La Crosse, etc. 156  
 8879  
 1035

Wednesday

Aug. 12, 1936. - Reading, 8879 (879)

Left at 5:43 A.M. near N. 1054.5

Home 879  
 (Anna's) 7 AM. 19th + 1st Av. 987  
 Manchester #20 948.6  
 Strawberry R. #10 966  
 Elkhart 981.4  
 Jura on #P 982.3  
 Gunders 993.9  
 #18 + #22 1001.8  
 Postville #52 + #51 1003.6  
 (Dinner before  
 from home)  
 #9 1019.0  
 Waukegan 1020  
 Church (Jura R.) 1025.6  
 at 1/2 (after out on  
 lower road) 1033.4  
 at edge of valley 1033.8  
 double back  
 over 243  
 New Albin 1045.0  
 Reno, Minn 1054.9  
 Brownsville 1061.8  
 #16 1069.3  
 La Crosse 6/14 1072.0  
 Dasselbach 1077.4  
 Dakota 1078.9  
 La Moille 1087.8  
 Homer Minn 92.3  
 6/14 - Jura 96.7  
 Winona Business - 98.4  
 Bridge 98.6  
 Ben Grip 1099.3  
 Marchand, Wis (3 hrs) 1108.7  
 Centerville, Wis 1109.1  
 Galoisville, #53, 1115.6  
 Holman 1127.1  
 Midway 1129.6  
 Onalaska 1133.2  
 N. La Crosse 1134.9  
 La Crosse, Wis. 1139.2  
 1139.9 - Jura back  
 La Crosse Hotel

45.8  
 33.8  
 11.2



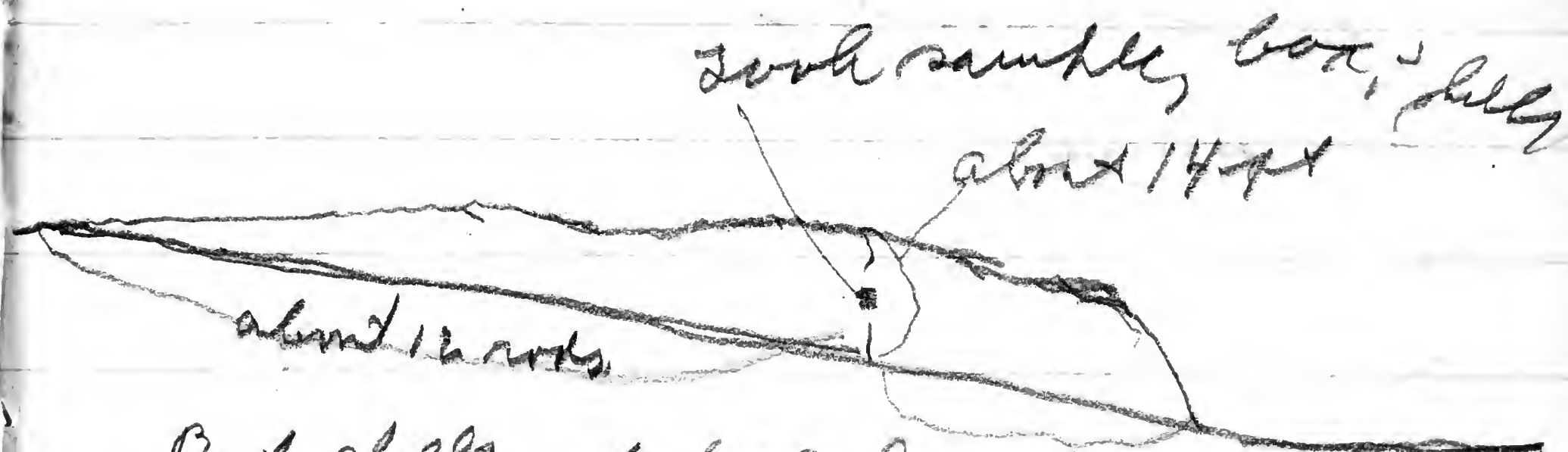
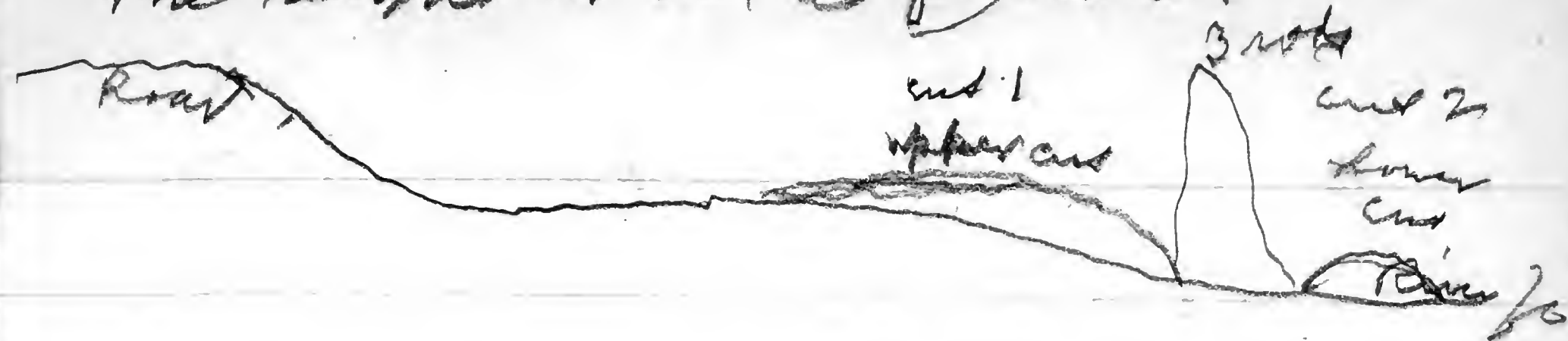
A heavy day, quite hot  
later

We drove via Annis, had  
breakfast, left Ella, & started  
on #13, to Wauchoy, then  
on #P to Postville & on #51 to  
Wauchoy.

We then drove towards New  
Albin. There are loess-like  
(but harder & no fossils)  
cuts on the uplands, but  
no real fossiliferous inter-  
-mittent on lower slope (near  
base) of long hill leading  
down to valley of the Upper  
Iowa.

The first cut is a few ft. (estimated)  
above the lower cut. It is on W.  
side of road, only.

The slope to N. is as follows



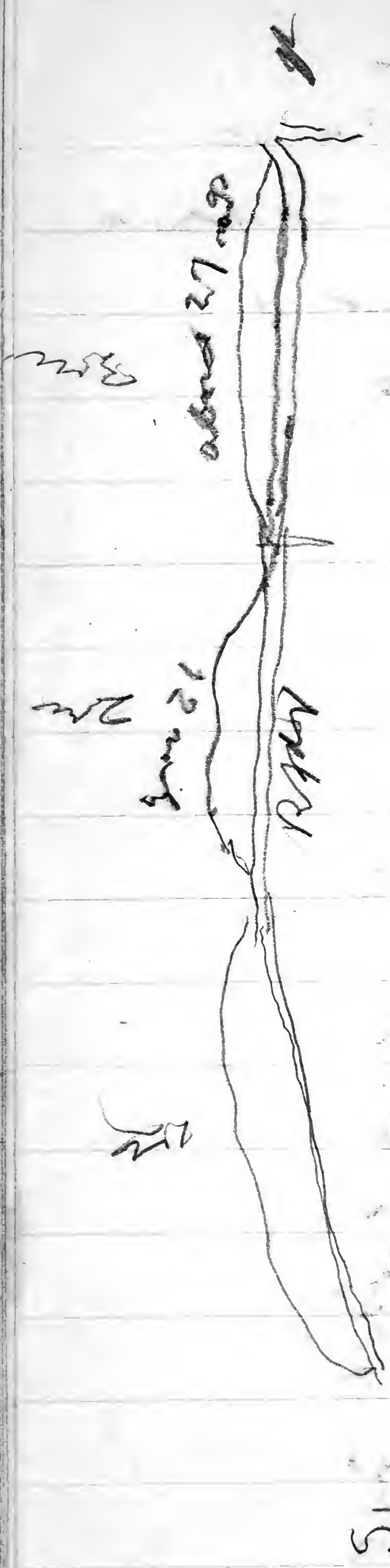
Best shells at 6-8 ft. about 5 rods

Took sample & box from about  
8 ft. above gutter. Top is 6 ft.  
higher.

The loess is mostly clean,  
but there are narrow  
sub-horizontal streaks of gray.  
Lower part is heavier & heavy  
more but stratified, - not  
loess.

Cut 1 is probably 10-12 ft above  
cut 2 & 2 & 3 are more nearly  
in level, - the N. end of  
3 coming to valley where 2, only  
a few ft. (6 or 8 ft) above.





cut 2-11, 200 ft  
 about 2-3 (in gully)  
 mostly yellow brown stuff (crater)  
 no fossils, 1 red sandy

cut is similar, a little  
 lower.

all have open about 1  
 feet each about in 2-3

Had puncture in cuts, changed  
 tires & had repair at New Albion  
 Drove up river on #26

then seems to be lower  
 spur or almost terrace  
 below general level &  
 just above valley



at 10 54.5, just below  
Rend, there is a clay pit  
in a sort of terrace. It is  
about 12-15 ft deep & shows  
a yellow material much like  
loess (especially the dust). Long  
much if it is stratified, with  
strands of iron, sand, etc.  
No shells.

We passed a big dam  
below Dubuque, under  
consideration.

We drove to Winona. The whole  
distance shows abrupt bluffs &  
knobs, - the "Winona Hills".  
The Mississippi is very low,  
show extensive bars which

are evidently usually covered.  
We crossed the river at  
Winona and drove to Galena  
and La Crosse.

The bluffs are mostly low,  
though a few sharp peaks  
appear opposite Winona.

Unlike the heavily wooded  
bluffs on the Minnesota side,  
the bluffs are mostly bare  
of trees excepting in the  
back ravines, and sometimes  
in the terraces in bluffs, &  
in the more broken part.

The bottomlands show some  
lagoons, and all along  
there is a ragged forest  
growth on the bottomlands,  
occasional sandy terraces  
show on the way down.



This is no level country (except in pockets). The valley is not wide and evidently not many bars when water is not so low as at present.

At La Crosse we hunted about and finally located at a tourist's place S.E. of the La Crosse Hotel - on #61?

We retired early and slept well after a strenuous day.

Thursday Aug. 13, 1936, left La Crosse (return) at 6:57 am			
Returned to La Crosse Hotel.			
La Crosse Hotel	1141.2	Turn S. on 35	1244.3
Calvert	1147.0	Patch Grove	1245.2
<sup>Physa at 1149.6</sup> Coon Valley	1159.3	Bloomington	1250.2
Westby	1169.5	#81 - (Benton)	1258.0
Viroqua	1176.9	(Grand River just E.)	
Turn on #29	1180.6	Lancaster	1266.6
Liberty Pk	1182.9	Rockville	1275.1
Monument Rock	1184.7	British Hollow	1276.7
Rising Sun	1189.9	Dickinsonville	1285.5
W.A. Mithing	1197.7	Kieler	1289.1
Seneca	1202.1	Turn to E. Dubuque	1291.9
#35	1207.2	at Dubuque	1294.9
Eastman	1210.6	E. Dubuque #20	1297
Pr. du Chien <sup>at #18</sup>	1223.5	Balena, Ill	1311.2
Turn on #18	1223.5	Cut - on return	1313.6
Turn on #18	1226.1	E. Dubuque	1329.3
Start #18	1229.3	E. Dubuque	1329.9
Dubuque (turn on)	1235.5	W. end	
Return -	1237.3	#52 #67	1330.5
Boise - N	1237.3 1/2	Turn on #52	1333.3
8 -	1237.6	1st cut	1333.5
		Belleme	1354.5



We drove S. on #35

The bluffs at La Crosse are covered with a low ragged growth.

A good range of bluffs below La Crosse shows some ragged timber, the bluffs curve to S.W. Bluffs come to road at 1146, - near Calvert.

A valley runs E. from Calvert, - bluff shows woods on S. side.

We drove up this valley (E) & the wooded bluffs show all along on N. side.

at 1149.6 - E. of Calvert, I dredged a few *Physa* out of a promising but polluted creek.

In deep upland woods along #61  
+ #14

I found a large *Fomes* on stump of oak (white oak?)

at 1184.7 - is Monument Rock, a tall pinnacle of rock very narrow, made up of blocks, - looks almost artificial, - very narrow. We drove to Pre du Chien & at 2 W. of the junction with 18 further S. we got stuck at a gas station (Red Crown) - sold us 10 gals of gasoline & on return paid 8 more in, - & the tank held 14! We also had one or 2 gals in.

We drove to Budyport - now almost extinct.

Up the road from depot (past the abandoned little town) the new road fills spots W. side & the east side is



are grown. In the place  
where main road goes a  
little down hill to new  
bridge (& about on level  
of top of terrace) there  
is a cut showing yellow  
loam but no fossils.

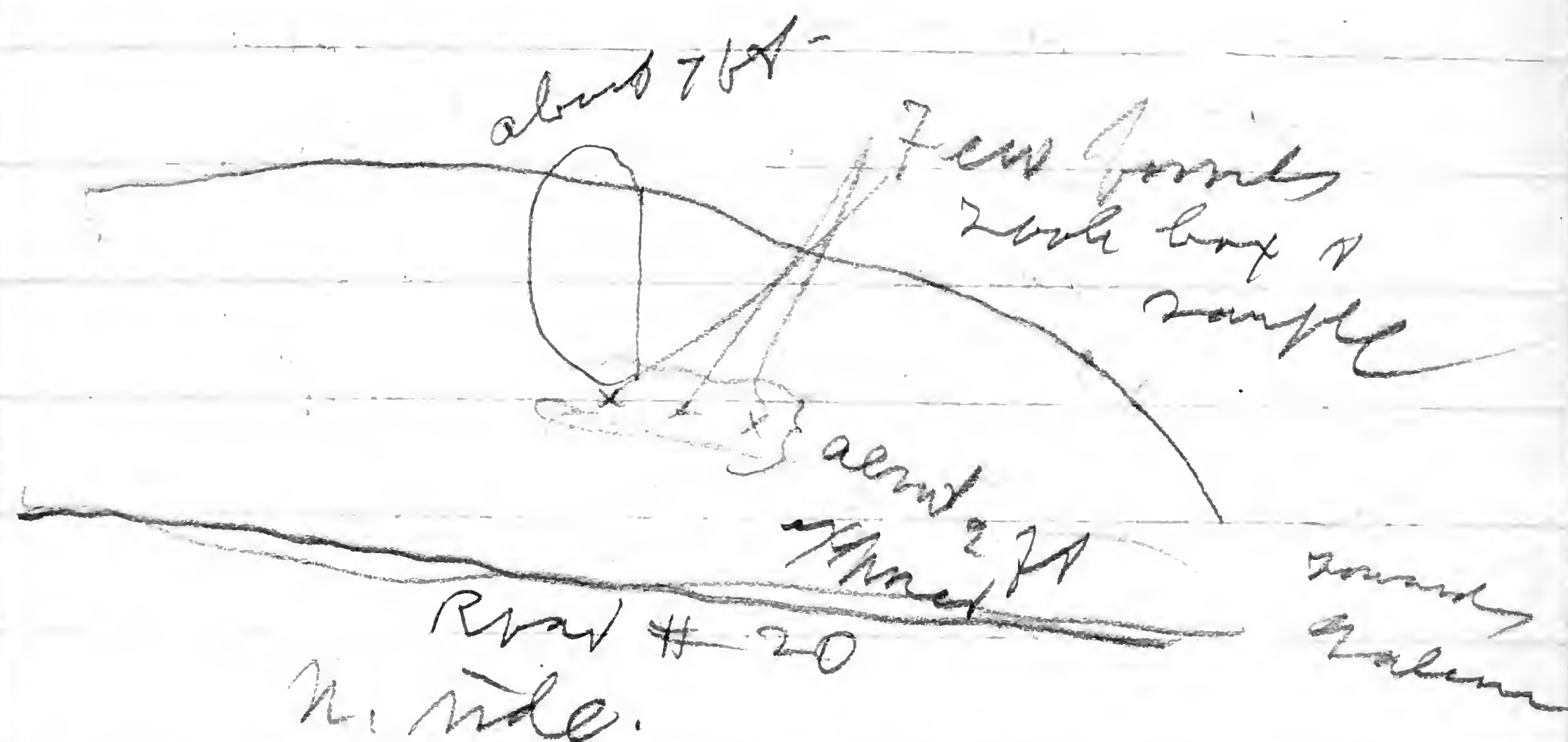
Probably 6 ft. exposed.  
The main road & bridge are  
only a little (20 or 30 ft?)  
below top of terrace &  
well above Bridgeport.

We stopped at Dickerville  
and looked at the Grothues.

We then drove to E. Dubuque, Ia  
& took #20 for Galena.

Part way (4?) up the hill  
just at edge of Galena, a  
small pit shows a few  
fossils in a rather hard  
yellow loam.

There were a few small nodules  
(regular & rounded) & a few shells.  
Took box & sample.



at 1313.6 on return

The Zimmerman cut,  $4\frac{1}{2}$  E. of  
E. Dubuque, on private road just S.  
of #20. A fine cut of  
very fine yellow loam, with  
few soft, small nodules, and  
scattered shells, especially about  
12 ft. from top.  
Loam is at least 20+ ft. deep,  
and runs up about to top.



Took sample, box, &  
picked (along) a few  
shells. They are  
scattered

at 1333.5, on 52 & 67

2 mi. S. of town in 1<sup>st</sup>

big cut - has yellow  
loam above - 8 or 10 ft? ,  
but no fossils

We drove to Bellevue

on # 52 & # 67, saw an  
upland road which offers  
numerous attractive views

but does not come in sight  
of the river until near  
Bellevue.

We put up at the Week  
hotel.

We were in rain much of the  
day, - most N. of Dickeyville. Was

Aug. 14, 1936, Friday

at hotel 1354.6	at start
Drove W. on main road	Boat Dune
on # 62	Bluff (return) 1432.3
Turned back on 1357.	Return to #80 turn 1435.5
Hotel at Bellevue 1359.3	Albany 1442.8
Turn to point 1360.3	Cordova 1452.2
Return to #52 & #67 1362.6	Port Byron 1457.4
Sabula (bridge) 1382.2	Rapids City 1459.6
Sabula (bridge) 1385.3	Hampton 1463.4
E. end bridge 1386.	E. Moline #6 1466.5
Sabula (business) 1386.8	return 1467.2
Return - Sabula 1387.5	Moline bridge 1471.7
Turn to #52 & #80 1388.6	W. end bridge 1472.4
Turned back to #52 1392.5	W. end bridge 1472.8
Back to #52 & #80 (in town) 1396.3	End - 1472.9
E. on #52 - (Turned back) 1398.1	Old bridge - Dicks 1476.1
Return to 52 & 80. 1399.9	Johns 1479.
Thomson 1409.4	
#30 1416.4	Home 1536.9
Fulton, Ill. 1417.4	
E. end bridge 1417.6	
W. " " 1418.1	
Clinton (down) 1420.7	
Return 1425.7	
E. end bridge 1425.7	
Fulton 1426.9	
#80 turn S. 1426.9	
#30 " E. 1429.2	
Bluff E. (turn) 1431.5	
back	



We drive out along the  
Mapuche road #62. to the  
big hill. This has been greatly  
changed. The road is blasted  
through rock & the grade  
reduced.

We returned to Bellare & drove  
down into the state park. Picturesque  
cliffs & fine views of valley.

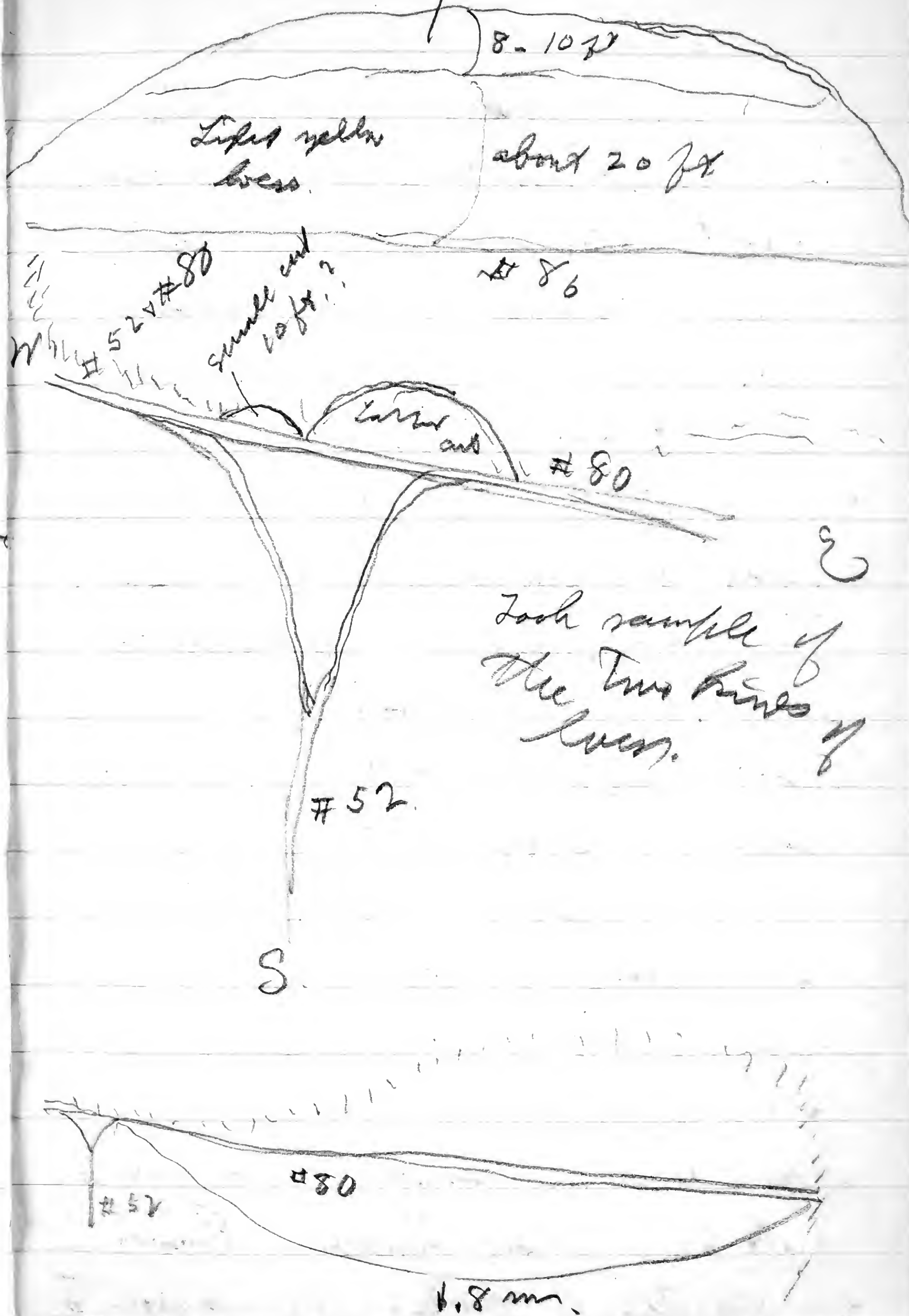
The road cuts an understation  
Drove south in #52x467  
at 9384.8 - above

woods beyond Babula.  
Collected Polypus under  
+ Bur. Oblique - creeping  
on moist ground, thick &  
a few under logs.

also a Panzer on long

we drove to Savannah + started  
S. on #80, then turned back  
to junction of #52 + #88 + drove to  
bluffs on #80 (E.). Return to junction

Looked at big cut  
Reddish brown





This big cut is just at W. end of big crescent formed by bluffs which recede abruptly and far out just below Savanna.

The loess is very loose & probably has a lot of very fine sand.

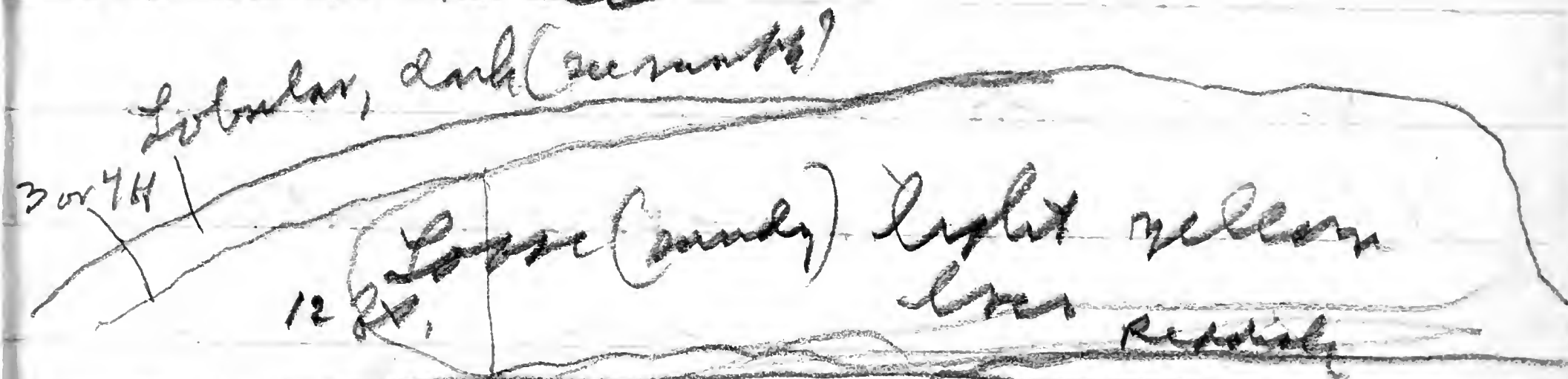
This bluff was fully exposed to the south & was evidently covered with prairie, hence there were no stumps, and none are found in the loess.

We drove S. on R. 90 to Fulton. The bluffs are not eastern on a broad crescent and do not swing back until below Fulton.

The plain is sandy, and in many places Euphorbia corollata whitens large areas.

We crossed the river to Clinton and had luncheon. Then drove along bluffs back to Lyons (near Clinton) and across river to Fulton.

Just opposite 211 Locust Place, along bluff, there is a large cut on west side.



Rock.

The light yellow loess is mostly crumbly (sandy) like at Savanna. Parts at left are firmer & show a sort of stratification (see sample). No fossils.

Along the Bluff Road - we drove a short distance to the bluff. Bluffs come to road at New Albany. Again run away east a little below.



at 1446.6 we ran up  
on a terrace - very broad  
+ flat - 12-15 ft<sup>2</sup> above  
lower level. Can see no  
bluffs E. We ran on this  
terrace.

Bluffs came in sight (distinct)  
at 1451.

Bluffs come quite close  
(abruptly) just below  
Cordova.

Here they look like  
rounded overgrown  
sand dunes.

The bluffs all along,  
from Savanna down,  
are quite low & rounded  
as they run back.  
Right at Savanna they are  
higher.

The knolls below are old dunes (some  
with woods), and show in cuts  
the rounded dune knolls also  
appear below Port Byron.

Below Port Byron the low  
rounded bluffs are near road.  
The river is also near.  
Same to E. Moline.

Bottoms wider at E. Moline.  
We drove over the new bridge  
to Bettendorf + on to John's.

A very hot day, - hot wind.  
We had bad weather for  
Julesburg all the time.  
1<sup>st</sup> day very hot; 2<sup>nd</sup> day rainy,  
& 3<sup>rd</sup> day very hot.

Stopped at John's, dropped in to see  
Ed. Bloomer & then drove home.



# Expenses

Aug 31 - Gas 11 gal. (+ 4 gal.) 1.98  
 Cong. route Cedar Falls .21  
 Sep 1 - Stampsville, gas, 11 gal 2.00  
 H. Cronkrie, of Polk Co. <sup>even</sup> drinks .20  
 10 gal. gas, 1.38 / gal. oil .25 2.13  
 Milaca, room 1.25, supper, 30, 5 1.60  
 8.12  
 Sep. 2 - Breakfast <sup>50</sup> <sup>5</sup> <sup>75</sup> car. gas 1.30  
 Dinner at Garrison 1.00  
 Walker, gas, 12 1/2 gals. 2.45  
 Supper at Mendota .70  
 Sep. 3 - 0  
 Sep. 4 - Dinner, Bemidji, Bemidji 1.60  
 Sep. 6 - 3 1/2 gal. gas + 1 gal. oil 1.90  
 Sep. 7 - Wadena, Min. <sup>Vapor. mt.</sup> <sup>Rhyndy, etc.</sup> .78  
 - Sank Center gas, 10 gal. 1.87  
 Changing tire 25, inner tube 2.90 3.15  
 Room (Carlson's) 1.25  
 Sep. 8 - Sank Center, breakfast .50  
 Redwood Falls - Dinner .50  
 Windom, gas 10 gal 1.81  
 Sheldon, room 6 23 - 10<sup>th</sup> m. 1.00  
 Sep. 9 - Sheldon - breakfast .41  
 Hudson Co., D. gas 10.7 gal. 1.60  
 Hawarden, Tablets, etc .71  
 Akron - dinner 46, 10 86  
 Mapleton - supper 1.00 1.31  
 Sook - Ponca + Sook City, 120, Mapleton 10 30  
 Zee Sioux City 25

1- 793.8 39.8 4- 916.4 - 42.4  
 2- 841.5 - 47.7  
 3- 874.0 - 32.5

Aug 31, 1936, Mon.

Started at 1:30 P.M. at 9754.

Home 754.0  
 Cedar Rapids, #30 779.8  
 #00 + #218 798.6  
 Vinton 812.9  
 La Porte City 832.1  
 Waterloo (Wisc) 846.8  
 Cedar Falls, #20 854.0  
 Waverly, #10 867.9  
 Plainfield RR. 878.7  
 Washburn 886.6  
 Charles City, #18 897.5  
 #10 + #18 897.8  
 No. 18 train W. 902.7  
 Floyd, - 903.4  
 #9 + #218 - 914.3  
 Orage. 918.3  
 #218 + # 924.8  
 Maryville 930.5

930.5

754.

176.5 m. to Sank

Ponca - #75 2.25  
 Mapleton - breakfast .41 \$33.10  
 Gas 9 gal. - 1.59 1.85  
 Oil .26  
 Carroll, dinner 91  
 Sook, paper 15  
 Sook, 1 con 20  
 Marshalltown - gas - 11 gal. 1.98

Belle Plaine - Sank 41



Clear & somewhat windy. Warm.  
 Dr. of Clinton trees with dark tops.  
 In some of the draws (from W.)  
 although grown mostly corn  
 smaller than back of shelter on  
 hill.

Cooled towards evening  
 We drove to Harris and camped  
 all night.

Much of the country with  
 of waverly dense green pastures  
 etc. The stubble fields are  
 also looking greener, & on the  
 whole this is better than  
 we have seen southward.

The corn is small and much  
 of it has been (or is being)  
 cut for silage.

Solidago canadensis just coming &  
 most common. Almost only new  
 in bloom.

1-9738-43.3 3  
 2-1017.3-43.5

1110

Sept. 1, 1936, Tuesday.

We started from Stacyville, Ia.

at 8:17<sup>1/2</sup> a.m. Harris - <sup>RR</sup> 1104.6

Georgis - 930.6 Turn E. 1120.2

#218 - 938.1 (turn back -  
 extract .3

State line 943.3 at SA Cross River,  
 below ferry 1116.7

Lyle, Minn. <sup>RR</sup> 943.5 Return to #61  
 1 mi. N. of station 1121.0

Austin (couch turn) 956.1  
 Blooming Prairie 956.2  
 920.9

Bixby 977.2  
 Pratt

Owatonna 989.2 (turn) Turn E. 1127.5

Clinton Falls 993.8  
 Medford <sup>RR</sup> 995.8  
 Faribault 1005.1

Dundas 1012.0  
 Northfield 1020.4

Farmington 1034.0 (turn) Return to #61  
 Rosemount 1041.8 (W. out #70) 1146.0

Radio Center #70 leaves #61 1146.4

St. Paul #61 1059.3  
 - arrival

White Bear <sup>RR</sup> 1068.2 shells  
 Hugo <sup>RR</sup> 1079.3

#8 & #61 1081.2  
 Forest Lake 1082.8

Wyoming 1087.0

Stacy 1091.3

North Branch 1099.4

Return to

Harris - <sup>RR</sup> 1104.6

Turn E. 1120.2

(turn back -  
 extract .3

at SA Cross River,  
 below ferry 1116.7

Return to #61  
 1 mi. N. of station 1121.0

Pratt City 1121.8

Rockwell - 1127.0

Turn E. 1127.5

at Cross River <sup>RR</sup> 1136.7

Return  
 To terrace - 1136.9  
 To west end  
 - 1139.8

Return to #61  
 (W. out #70) 1146.0

#70 leaves #61 1146.4

End of gravel #65 1156.3

Turn N. 1158.1

Brownsvick 1163.7

Turn N. 1164.5

Ann River 1168.5

#23, turn left 1169.1

and right 1171.1

Ogilvie - 1176.8

Boak 1183.7

Milaca #169 1189.1

Milaca RR 1189.4

Return to



We left at 8 AM. and drove west to #218

It rained much of the night, with much thunder. Day cloudy.

Collected Vireo & Lynceus & Phan. campanulatus on shore of White Bear Lake. Roads approaching & beyond St. Paul, but beyond Hugo very flat.

We drove E. of Rock City to the St. Croix River.

I pulled up Union & dredges. Campeloma, Phan. bicincta, etc. Drove E. from Rockchurch to the St. Croix River. Water is higher and dredging was poor, but I got some Possidium, Campeloma, etc.

Phuffers are numerous on this river side, but a low valley first & then broad terraces on Minnesota side.

Golden rods are much farther along northward. They were just budding & beginning to open at Orange & at Rockchurch, etc. They were in full bloom between Ogilvie & Milaca is nearly all cut over land. Only scrubby quaking aspen & white Birch! Very few farms in this part. It is a pitiful sight to see the devastated country. There is no current area (this season) in the stretch to Milaca.

We drove to Milaca and put up at a tourist's home near the hotel (one block S.). Marjic had the car repaired. A cool, windy evening.



Sep. 2, 1936 - Wednesday.

Left at 8:35

A very foggy morning after a cool night. They have had much rain here just recently.

First after field of winter corn - 1 to 3 ft high, - with tassels

Most of this is cut over land, Farmer's corn, & few small specimens

Rum River shows only a few pearls. It was evidently dry.

Beyond Rum River a good pine (also)

at 1208.4 we crossed Rum

River again. Also at 1210.5. <sup>also at</sup> 1211.5  
Soil poor - many boulders on surface & in piles.

We drove along W. side of Miller Lake, & picked up a lot of shells on beach.

*Armodonta bostryx*, *Lymnaea stagnalis*, *L. emarginata*, *Planorbis*, etc.

Lake Eden S. J. Requist

RR. at Milaca 1190.0

Page 1199.3

Rum River 1202.0

Onamia RR. 1212.2

Shells on beach 1216.4

Garrison #18 1234.0

Brainerd, 1254.7

#271  
Lost about 4 hrs.

Brainerd, Tenn. W. m. 1255.5

Mississippi River 1256.1

Gunn #371 1257.6

Long Lake 1264.4

Long Lake 1265.7

Wisconsin RR. 1271.0

Requist 1277.2

Round Lake 1266.7

Gull Lake 1267.7

Genoa RR. 1281.4

Pine River 1286.2

Cane River 1290.0

Mildred RR. 1293.9

Bismarck #87-1299.2

Island Lake

Hackensack 1307.1

Lothrop 1317.5

Walker RR. 1320.7

Kaboom Riv. 1324

Leech Lake

Williamson

Cass Lake RR 1346.7

Lake Audubon 1347.8

Mississippi Riv. 1349.0

" 1351.6

Bemidji 1360.4



It cleared up before noon.  
Left the shell beach at 12:25 PM.  
The lake is shallow along shore  
& there are many rocky (bouldery)  
reefs. Landing is difficult in  
most places.

The beach is pebbly & bouldery  
all along.

Compass shown along #18 &  
then on along #371 beyond Brainerd.  
Long Lake is very rocky at  
the west end.

At 1266.7, on beach of Round  
Lake (I marked lake as "Long Lake",  
correct this) we picked up  
*Syrphus neozonus*, *L. thurleyi*,  
*S. ummatus*, *Physa*, etc.  
(see box & purchase)

The day turned out fine?

At 1310.7 we entered Chippewa  
North Ford

At 1347.8 - beach of Lake Antrim.  
I picked up small box of shells on beach.  
We drove through Cass Lake  
to Bemidji and had supper.  
We then drove to Dewey  
cottage. We found them 5 1/2  
miles N. of Bemidji, on the  
east side of the lake.

This area is still well wooded,  
*Betula papyrifera*, *Populus grandis*,  
*Aspens* and *Quercus ellipsoidalis*  
being the most conspicuous trees.  
Lake Bemidji is quite a body  
of water, forming a chain with  
Lake Itasca, Cass Lake & Lake  
Winnipegosis, - a series  
of basins which are more  
extensions of the Minnesota



Sept. 3, 1936, Thursday

I spent the forenoon in cleaning shells and packing my material.

In the afternoon Elaire took his motor boat and we (Margo, Paul, Claire & I) went to the Mississippi outlet (about a mile) and went down two or more miles. The stream is mostly narrow & shallow, with many boulders, etc. on bottom.

It is really merely an elongated pond. I noticed following:

*Nauplius adum*

*Potamocoris praecox*

" *pectinatus*

" *gustatorius*

*Myrio phylax*

*Ceratophyllum*

*Valisneria*

Wild rice, etc.

On higher banks white, Norway spruce, white birch, Balsam fir, white spruce.

In lower places tamarack, black spruce, etc.

We could see rather numerous fish in the clear water.

Also dead shells of Union (*U. ventriosum*, etc). I dredged a few *Apharion ruber*, an *Anodonta* & dead *Pleuro* *trivialis* & *P. canaliculatus* also dead *Valvata* and *Amnicola*.



We returned (The motor  
broke down on Quise road)  
and in the evening Mr.  
Mrs. <sup>Max</sup> Creager of Benvidji.  
He was formerly in the  
Montrose Hotel at Cedar  
Rapids.

Lake Benvidji is surrounded  
with alternating low  
(sandy or gravelly) beaches  
and higher banks or  
weathered bluffs, mostly timbered  
excepting on the faces of  
the latter.

A fine, clear day.

1936

Sep. 4, Friday.

I spent the forenoon  
partly in labeling and  
packing collections and  
partly in collecting fungi  
and lichens nearby -  
chiefly on *Populus balsamifera*,  
*Populus grandidentata* and  
*Quercus ellipsoidea*, - partly  
on dead logs & stumps & partly  
on living trunks.

We expected to go to Cass  
Lake in the afternoon, but  
Marsie was sick and  
I finished packing, wrote  
notes, etc.

Cloudy, rain a little  
in the morning, but  
there was some sunshine.

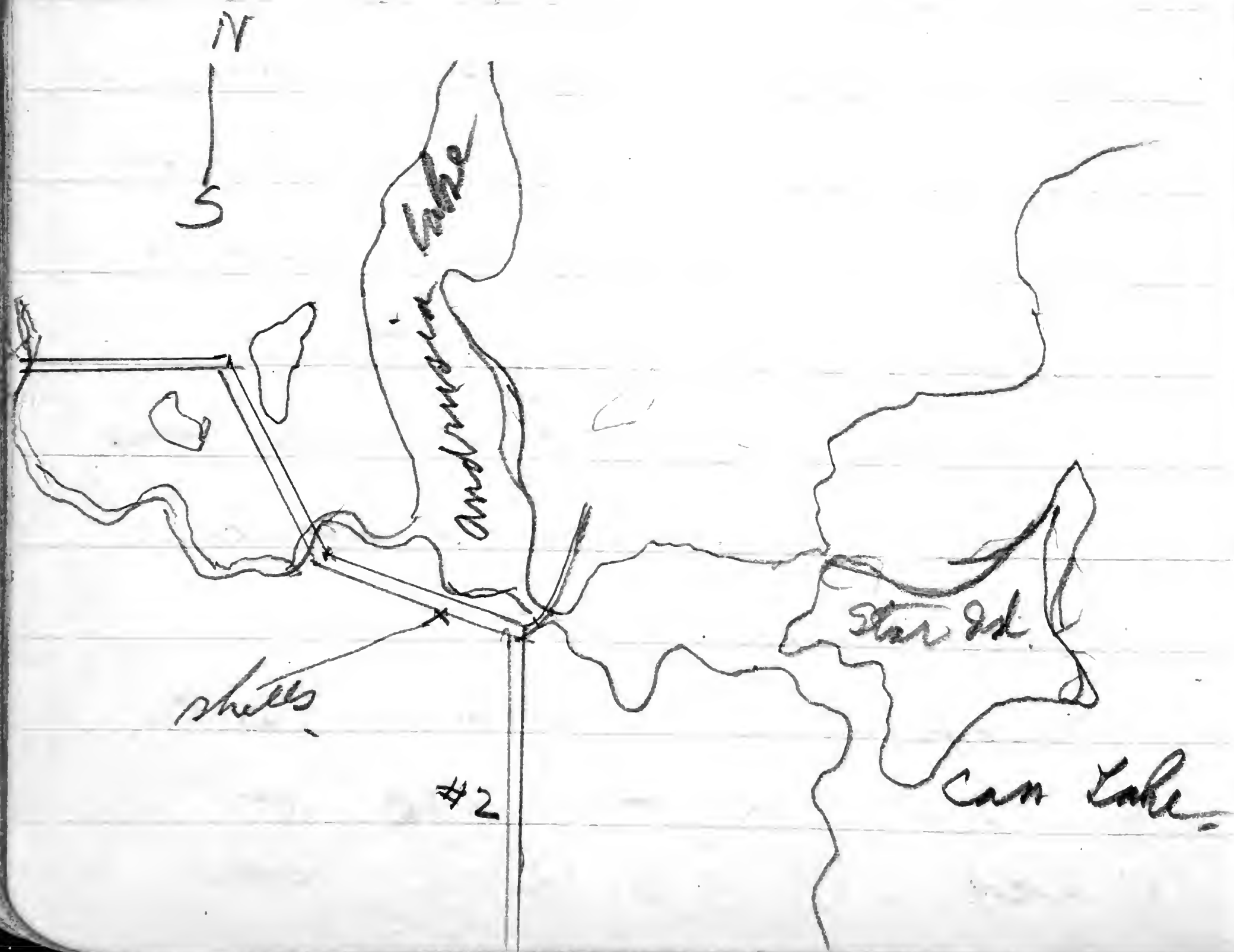
In late afternoon we drove to  
Benvidji and I walked up



the west beach nearly  
half a mile. Found only  
a few older shells (see small  
set). *Pleuro, campandula,*  
*Lymnaea emarginata* etc.

We had dinner at the Eddy  
Restaurant and then drove to  
the cottage.

We drove back to the  
cottage and returned early.



Sep. 5, 1936 - Saturday.  
It rained at night and in  
the morning.

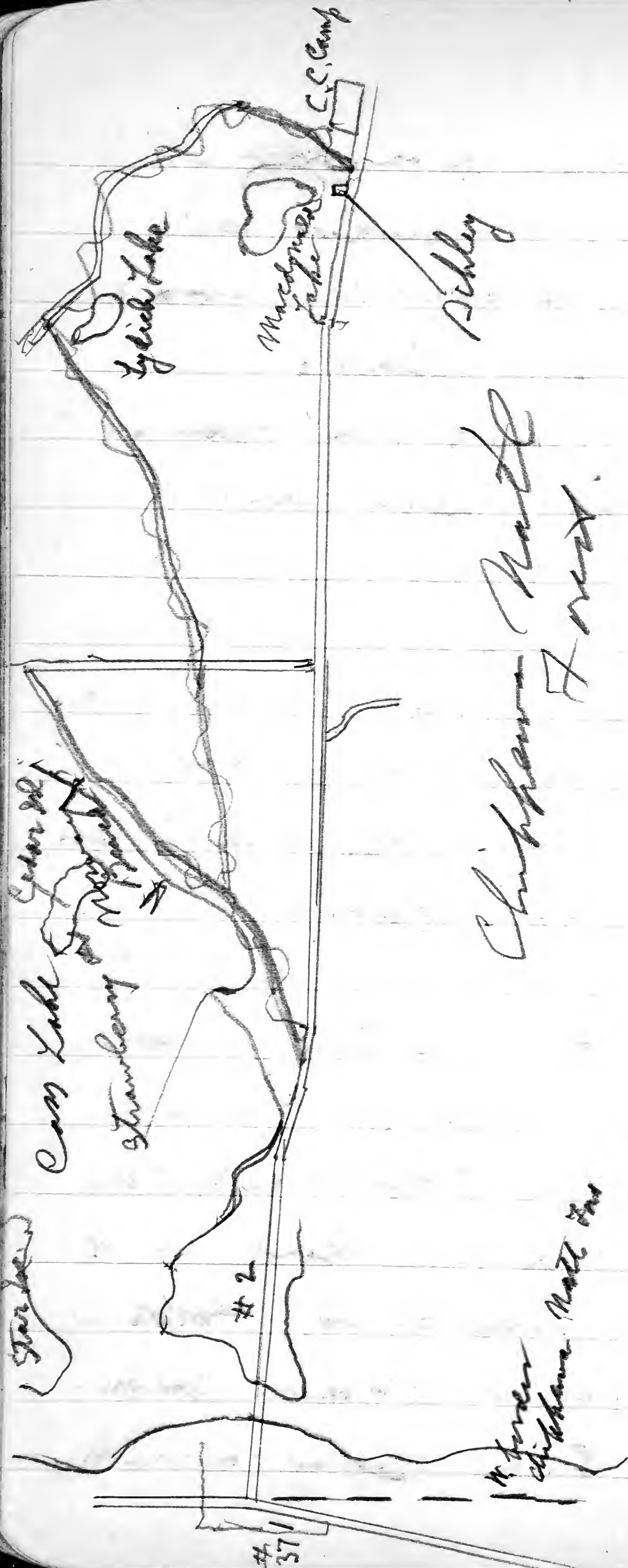
I collected some fungi (*P. f. f.*  
etc.) and packed some material.

In the afternoon we  
drove to Cass Lake, and  
thence E. on #2, to the  
Chippewa National Forest.

We drove to Norway Beach  
and saw a fine stand of  
old *Pinus resinosa*. Trees  
very tall & without branches  
for 75 ft. or more, 125 to  
150 ft. high (estimated).  
A few white pine (some)  
& scattered lots of *Pinus*  
*banksiana*.

Collected a few shells  
on Norway beach &  
picked up a few cones.





of *Pinus resinosa*, & a few off the  
trees of *P. Banksiana*.

We then drove on road  
past Lylich Lake.

Here on beach we saw  
very fresh deer-tracks.

Collected shells of *Lymnaea*  
*stagnalis*, *Planorbis* camp.  
*Plan.*, *bicarinatus*, & *Amurensis*  
also *Thysa occidentalis* in  
fruit & the small shrubby  
birch. (see specimens)

We then drove to the C.C.  
Camp to #2 & turned toward  
Cass Lake. At a point  
8.8 mi. E. of Cass Lake (on  
N. side of #2) there is a  
tamarack swamp. collected  
a few cones of *Pinus resinosa*  
& *P. banksiana*, in trunks



of P. Barlow, Blank House,  
Tamanac.

Drove to Bemidji, - stopped  
✓ then drove to cottage.  
Spent evening in packing  
and writing notes.

Sept. 6, 1936 - Sun.

We started near noon to drive  
around Lake Bemidji, - starting  
north.

Many cottages (some large) line  
the lake.

Many white birds. Few  
large Norway pines.

On N. E. beach I collected  
some shells with 1 broken  
*Lymnaea stagnalis*.

On N. shore I stopped in a  
Tamanac swamp. Collected  
a few Buryi, lichens & some

We lunched in park and  
then drove to Lake Plantagenet.  
Stopped to get strawberries &  
some raspberries.  
Lake Plantagenet has rather  
marshy shores as far as we  
could see.

We then drove N + E through  
cutover dune area.

Collected puffball in road &  
Aretosiphys in field.  
Latter very common.  
Found 2 *Boletus* in sandy ditch  
along road.

Saw many tracks - some  
said to be sheep, but many  
deer, as were dropping.

We returned to Bemidji &  
went to the movie.

Rained heavily as we drove in,  
after storm.



Sept. 7, 1936 Mon.

Partly cloudy, - but a pleasant day.

Before turn to go toward Stasa the dunes were & rougher lift sets in many boulders.

We stopped at a balsam swamp at 1539. I collected balsam cones & branches, *Oplopyxis*, small logwood (pines & birches), old pink lady's slipper & lichen on old fallen branch of balsam.

Also an agave. Some of these were marked as at 1539.9; correct this label. At 1541.3 a good black spruce & tamarack swamp.

Collected black spruce branches & cones, & Betula (shrub) branches.

We drove to the Stasa State Park. We first went to the

Left Stasa at 9:50 am.

Deming - 1507.6

#71 - Bemidji 1512.2

Chautauque road 1515.7

(Return road - yet) 1523.0

#85 1528.2

Indian swamp 1539.

Black Spruce & Tamarack swamp 1541.3

#92 Stasa Park 1542.1

Lodge & P.O. 1543.9

Headwaters Miss. 1549.6

Back to Lodge 1554.2

Back to #71 1555.6

at 3. mi. Stasa L. 1560.3

Return to #71 1560.4

Camp Rapids #34 1577.4

#87 1581.7

Menanga - 1589.9

Sebeka 1598.8

Leaf River 1609.6

Wadena 1613.0

Hewitt road #3 1621.8

Bertha from m. 1626.7

Engle Bend 1633.7

Charissa or 1638.7

Browerville - 1644.1

Long Prairie <sup>town</sup> 1652.1

Rosford Prairie 1657.1

Little Fork 1660.6

Kandota #8 1669.1

Sank Center #52 1670.4

1670.4

1668.2

2.2

1542.4

1539.

3.4

1542.4

1541.3

1.1



lake shore where we picked up  
a few shells. *Plan. campanulata*  
were living in a small pool of  
along edge. We then drove to  
the head of the Mississippi (where  
it leaves Lake Itasca). Here it  
is a mere creek 6 to 8 ft. wide.  
We walked across it twice on bridges.  
Along the shallow edge we picked up  
(mostly living) *Lymnaea stagnalis*, *Plan.*,  
*campanulata*, *Ophiorhiza sulcata*,  
etc.

There are fine *Pinus resinosa* &  
*P. strobus* in the park, and the  
drive is splendid.

We returned to #71 & drove  
S. & turned in near S. end of lake.  
I collected shells on the beach, -  
most *Plan. campanulata* & *P. bicolor*.  
We then drove south on  
road #71.

Below Park Rapids the country is  
flatter & only distant groves of  
conifers are visible.

Some groves near road - S.  
Below Bemidjia the thickets are mostly  
growing up in low places  
also some *Tamarix* & *Baccharis*  
*sp.*

In Leaf River, at 1609.6, I  
collected a set of *Campeloma*  
in very shallow margin.

Very few (~~of any~~) native conifers  
S. of Wadena.

More below Bemidjia.

Below Leaf Prairie a fine level  
prairie

Near Little Lake a *Tamarix*  
swamp

at 1668.2, on beach of  
Little Lake I gathered a  
box of drifted stuff.



We drove to Sauk Centre & started on #71 for Hillman, but about a mile out we had a puncture (& cut up the inner tube) and I hired a farm hand to change it for us (25 cts). We returned to Sauk Centre, bought a new inner tube and had it put in. We put up at the Carlson Tourist place. (1.25)

The day has been mostly clear and pleasant, and well worth while.

1704.4 - #20  
23 & 71 - 1709.8 - present  
1846.2 cat #16  
Sep. 8, 1936 - Tues

Left Sauk Centre at 8:30 A.M.

Sauk Centre	1674.1	Orleans
#52 + #71	1674.8	Spirit Lake.
Elrosa	1686.6	#9 + #
Calgrade RR. Sta.	1695.5	Lakeside Lab.
Waukegan 55	1696.0	
Bergeville		
New London	1708.9	
" RR. Sta.	1709.5	
Spicer	1714.1	
Return	1714.3	
Hillman RR.	1724.3	
Wilmot #12	1724.3 1/2	
Wilmot	1726.0	
#212	1750.4	
Olivia (road)	1751.9	
Norfolk		
Morton Road	1767.9	
Return		
Redwood Falls	1774.4	
Rowena		
#14	1798.1	
Lamborn	1800.1	
#47	1807.8	
Windom #60	1824.3	
Bergeville	1824.8	camp home
Jackson, Minn	1848.0	
State line.		



A beautiful clear day.  
We travelled over nearly level  
prairie.

Small groves & thickets below Belgrade  
somewhat rough. Still rougher &  
wooded beyond #23.

We stopped at Green Lake and  
spiced and I picked up  
shells. *Unio* & *Anodonta*  
all eroded by water.  
A nice body of water  
with some higher wooded  
shores.

Glanted grass with dead tops - common  
Flatter again - prairie - S. of  
Wellman.

Drop into valley at 1767.5  
Minnesota River here small.

Bluffs more wooded on S. side.  
Somewhat cloudy later in day.

at 185 ft - about ~~at~~  
~~Belgrade~~

Roughly - wooded at Jackson  
Below W. below Jackson

Turn S. at 1854.6

Turn W. 1858.2

Turn S. 1860.2

#276 1862.8

Templar Park 1866.2

Turn W. 2 Orleans 1867.1

R.R. Sta. ~~Spring Lake~~ 1868.7

#9. off. det. 1868.8

#71 ~ #9 1869.6

Turn S. - #32 - 1872.6 1/2

McKinley 1876.3

S. of Millen Bay - R.R. ~~at~~ 32 1877.8

Turn E. 1879.8

Turn S. (#71) 1881.3

Milford - (camp, W.) 1882.6

Turn W. on #1893.0

Hartley - 1909.8

Sanborn - 1919.0

Sheldon - 1929 - Turn S.



Below Jackson, Minn., we follow  
detour 3 mi. W. & then S., and  
instead of going back to #71  
We followed Co. roads W. & S. by  
way of the state line road  
To Crandall's Lodge and on W.  
side of Spirit Lake, via Temple's  
Park, to the depot at Spirit  
Lake & S. to #9.

We followed #9 to head of  
H. Oborg's & then S. to Lakeland  
Laboratory.

We noted the new building.  
The mess-hall (old barn) & cabins  
near McKinstry's house, and  
the lab. buildings.

The 1<sup>st</sup> lab. is marked Macbrite.  
The library & administration bldg.  
on top of knoll where tank store  
marked Shimick, and a lab. S.  
marked Parnell. Two more

Labs. are being put up and  
I suggested S. Calvin and Bodine  
for these. Mr. Smith will use  
H. J. Smith (Gr.) for the boathouse.  
The old original cottage will be saved.  
A separate sewage system will be  
constructed for the cottage area  
and the old will be used  
for lab. area.

Separate well-water & lake water  
systems will be used. The  
McKinstry well will be used.  
Some trees will be planted  
and I suggested that small  
trees be planted to insure  
deep-seated roots.

We drove to Milford for supper, &  
then to #18 & on to Sheldon,  
where we put up at 623-10<sup>th</sup> St., after  
finding hotel, etc. full.

Thunder storm in evening.



Sep. 9, 1936, Wed.

Left Sheldon at 7:52 AM.

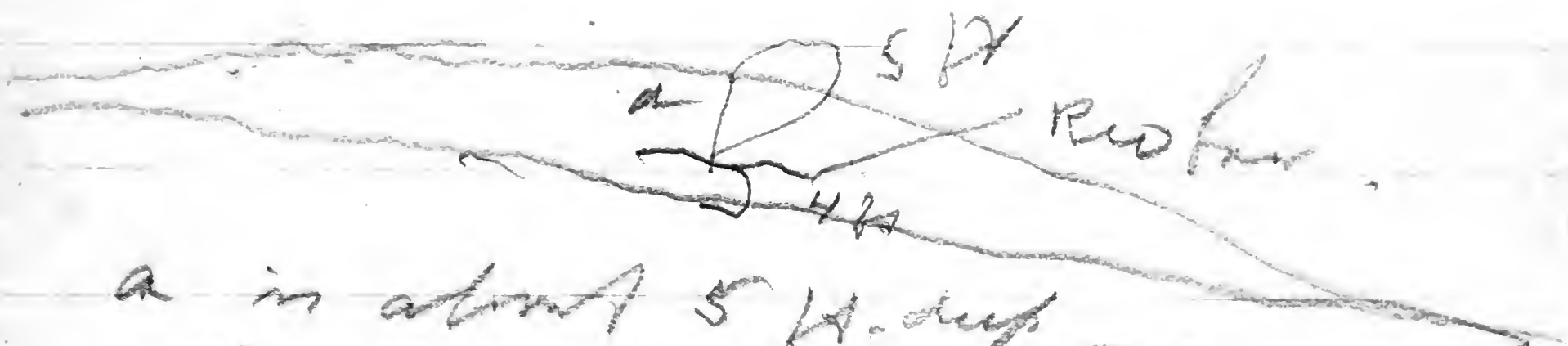
a fine clear morning after rain of last night.

1933 - Floyd River - a creek.

We drove W. of Hudson (1st road)

past Hawarden road to low bluff

N. side



a in about 5 ft. deep - a heavy yellowish clay with many small nodules in places. Faint iron ore & below it a grey heavy layer - no chert.

Returned to Hawarden road & went south

(going in 1929)

Sheldon, (return to #18) 1932.1

Boydton (road) 1940.0

Hull 1946.7

(Perkins) #75 1948.9

Rock Valley 1956

Rock River 1958.7

Turn S. off #18 1963.4

Turn W. 1968.6

Big Sioux River 1968.6

Hudson <sup>New</sup> 1969.3

" main rd. 1969.4

Hawarden road 1970.4

Bluff W. (on return) 1971.3

Hawarden road (return) 1971.4

Turn W. 2nd road 1973

Turn S. on 7th 1975.4

Hawarden 1976.3

Low bluff 1976.3

Low cut ex 1976.3

Return (2nd) to Hawarden road 1977.2

RR 1 1978.6

Turn W. 1979.0

Bluff 1980.7

Back 1981.1

Turn W. 1981.6

Return to Hawarden road 1983.4

River 1983.6

Big Sioux

on #16 <sup>at 10 1/2</sup> 1987.6

Return to #12 1987.8

12th road 5 1988

Big Sioux R. 1988.7

Base of bluff 1989.8

small cut 1990.4

Larger cut 1991.5

Turn S. (accompany road) 1995.7

Turn E. 2000.8

(Turn S) 2002.9

went on E.

at foot of bluff 2005.7

Turn S. on gravel 2006.1

Ohio Mill 2007.3

Big Sioux 2008.1

Chatsworth 2009.4

#12 Chatsworth 2009.6

Akron 2017.0

" (Return) 2017.2

Bridge 2017.3

Base of bluff 2019.9

Top of bluff 2020.2

Spink #77 2028.4

#77 50 2033.5

Vermillion 2044.2

Turn S 2044.4

Back to #50 2045.3

#77 & #58 2055.7

#77 Turn S 2057.8

Turn S 2058.6



At 1976.3 (.9 mi. W. of  
Hawarden Bm (1975.4) There  
is a cut about 10 ft. deep.  
It is probably drift (with  
small boulders) cleared by  
on return this cut is 1976.4

Turn W. to lower cut at 1981.1  
(on return from top of  
hill).

N. side



This cut shows yellow loess  
with more gray & some streaks of  
bare. Clear to base. No shells,  
numerous small nodules. (See sample)  
Another cut at top of hill. Low  
& overgrown

Drove to Hawarden. Then west,  
at 1990.4 there is a cut  
about 6 ft. deep. All yellow  
loess with many small nodules.

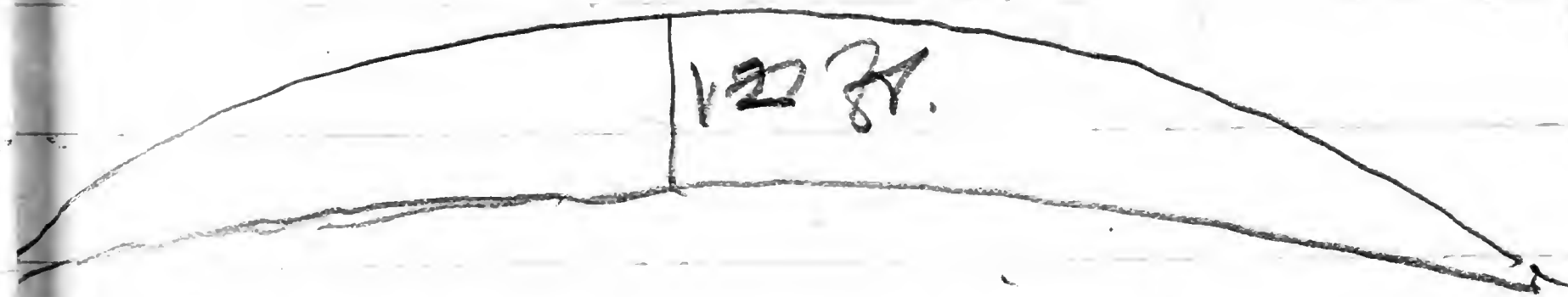
N. side about 6 ft  
no shells.

Bluffs are some higher as we  
go S. towards The Missouri,  
this is rough-rolling country.  
At 1991.5 a good cut at top  
of one of the mounds.

It is about 300 ft. long &  
12 ft. deep & shows light yellow  
"Missouri" loess all the way. The  
upper 3 ft. have many small nodules,  
few rounded ones below.

No shells.

N. side



At 1992.2 a similar cut, 7 ft.  
deep. — No shells but many  
nodules in upper 4 or 5 ft.

Other cuts follow.  
Loess all the way to Alcester & South  
same rolling country.

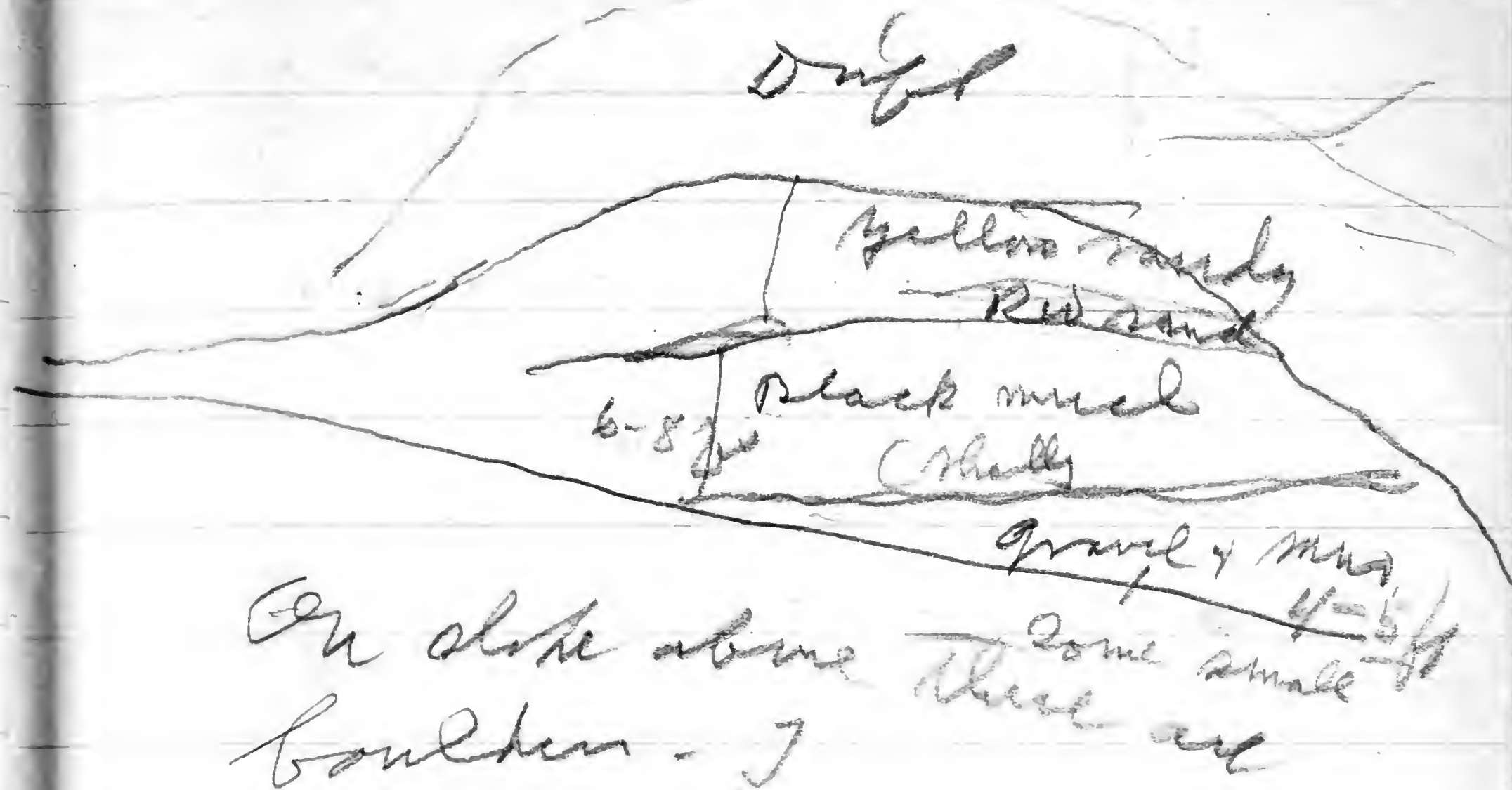


On bluff (last slope going E.) There is a long cut along road - 5 to 6 ft. deep. It shows  $1\frac{1}{2}$  to 2 ft. of yellow loam with many nodules, & below it is gray with iron tubules.

No fossils. Foot of bluff We drove to side of Otis Hill The road starts up hill here (at 2007.3). and a high cut or bank on right, just N. of Mill site shows 4 or 5 ft. of sand and gravel at base, then about 6-8 ft. of a hard black muck with many shells (aquatic), much broken. Collected a small box.

Above it about 8 ft. of red & yellow sand.

This is the end of a small ridge. which runs at least



30 ft above top of cut (x still higher back) It shows pebbles & small boulders to top.

Drift is above sandy layer. We drove to above, had lunch, & then drove towards Spink, B. Hill.

At the first bluff (2019.9) there is a long cut running from near base to top of bluff. It is about 5 or 6 ft. long, & at least 12 ft. deep on the S. side,



which is better. There are many small nodules in upper 4 or 5 ft. & fewer rounded ones in lower part.

A uniform yellow loess, no fossils.

S. side.

Side road

12 ft. deep 500 ft.

Took sample round no. 12.

W. side of hill also shows 200 cut - whole length

At 2022.4, at base of a long cut down a rather mild slope (down to west)

I found about 3 ft. of gray loess exposed. Abundant iron tubules - no fossils.

see sample

Other cuts along road west.

near A. Spink & W. of road.

more blatter. Also 2.

about 1/2 a mile, farther S, a mile. Bluffs on 1/2 mi. E. of turn in 77 & 50 at 2058.6

We drove to Vermillion, S. Dak. This is on a flat plain, like a terrace. The "bluffs" at Vermillion are 40 or 50 ft. high, - wide bottom all W. N. & E. is flat.

We drove back on #59 & 77 to Elk Point & to ferry toward Ponca. Then our hills. The Ponca

Elk Point 2065.6

Turn S. to ferry

Ferry 2073.

W. side river 2073

Ponca 2076.1

" (fired) 2077.7

#20 2085.9

Jackson 2089.8

Do. Sioux 2098

Bridge 2099.8

2000.

2192

2141 - 2102.3 - 2102.4

2141 - 2102.3 - 2102.4

2141 - 2102.3 - 2102.4

2141 - 2102.3 - 2102.4

2141 - 2102.3 - 2102.4

Little Soo on #141 2135.7



Out of Ponca, Feb. on #12  
 at 2079.1, a big cut  
 about 500 ft. long 12 -  
 18 ft. deep - Yellow loam  
 N. side



Shells above and below  
 mostly in lower part of  
 upper bed.

A second cut on top of  
 hill at 2079.3, 15-18 ft  
 deep - saw no shells. Yellow.

We drove on to Jackson,  
 So. Sioux City & Sioux City  
 We follow #20 & turned S.E. on  
 #141 and drove to Mapleton  
 We had supper & took a room at  
 a private house. (H. 7).

The bluffs on the Nebraska  
 side run from Dakota City to  
 Jackson, Ponca, and then up  
 the river beyond Vermillion.  
 Loess (rounded) topography everywhere  
 between Ponca and Jackson.

Same topography between Abson  
 bluff & about 1/2 mi. E. of Spink), -  
 then flat W. & NW. & S.

The loess ridge runs SE. (on W. side)  
 to about 1/2 way between Westfield, Ia. &  
 Elk Point, S. Dak. Then down to  
 narrow ridge.

No fossils in this part. It was  
 evidently prairie, as now, and had no  
 shells.

The Nebraska side had groves &  
 abrupt bluffs, & fossils occur.

The bend in the Missouri River westward  
 and the high bluffs on S. side account  
 for failure to build up bluff on flat  
 plain toward Vermillion.

2079.1  
 2077.7  
 1.4



2149.5  
2145.2  
4.3

2149.5  
2077.7  
1.8

Sep. 10, 1936. Thursday.

We left Mapleton at 7:23 AM.

Partly cloudy

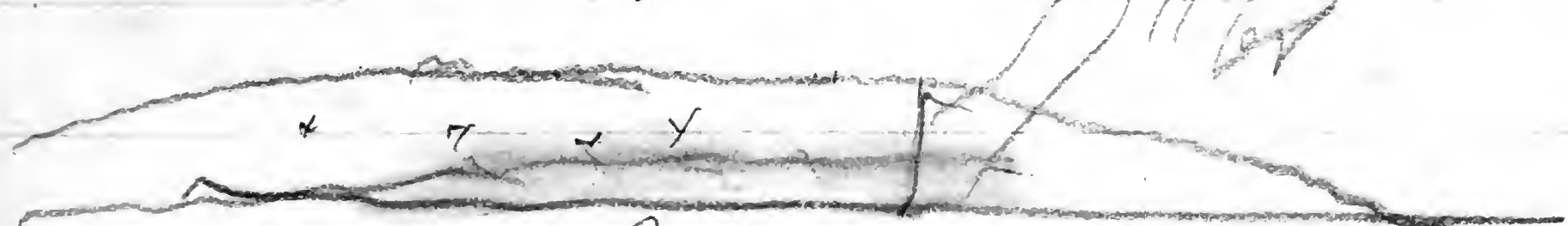
Same rolling topography as in  
S. E. So. Dakota

Two cuts shown are fossils, but  
modules, etc. as in So. Dak.

A cut at                      shows very blue  
shells - mostly fragments

At 2049.5 - Cut about 300 ft.  
long & 10 or 11 ft deep. Yellow loess  
with scattered some modules & scant  
shells scattered all along, but always  
a little more abundant in spots

4.3 mi. S.E. of Mapleton



Shows vertical change

Took box from near middle,  
where shells are slightly more common.  
Took sample, mostly of shells.

Mapleton 2145.2  
cut at 2149.5  
Mtc 2157.5

Charter Oak 2160.5

# 59 2174.6

Denison #30 2177.5

Vail R.R. depot 2186.9

West Side 2192.7

Acadia R.R. 2195.8

Carroll 2205.7

Blidden 2213.0

Ralston

Scranton 2225.9

Jefferson 2235.5

Grand Jr. 2243.6 1/2

Beaver 2248.5

Ogden 2254.6

Boonville 2260.1 1/2

Jordan 2269.5

Ontario

Knes #69 2278.7

Nevada 2287.5

Colo 2294.7

Co. line 2299.1

State Center 2303.1

W. M. R. 2310.6

Marshalltown 2318.1

L. Grand Jr. 2326.5

Montour 2332.2

Jama #63 2339.7

old was 2341.0

Gladstone 2344.3

Chelton 2350.8

Belle Plaine #212 2357.8

Iowa River 2360.6

are #21 2361.6

Koshta 2365.3

Marengo #6 2374.0

So. Amana 2379.8

C. M. & St. P. Ry 2382.7

#149-12 2384.7

Homestead 2385.3

Orion row 2391.8

Liffin 2397.4

Oakdale row 2401.1

Coralville 2403.3


Iowa City, bridge 2405.1

" " home 2406.5

754



Similar cut at 2150. - across top  
 of ridge - about 500 ft long - 10 to 12  
 ft deep. S. side shows no shells,  
 scattered shells on N. side & round  
 nodules. Show vertical cleavage. Yellow  
 brown (no shells) <sup>4.8 mi. S.E. of</sup>  
<sup>maple</sup>

W. N. side  
  
 shells mostly along middle, but  
 few & scattered.

at 2150.6 on #141 - a long cut  
 (over 1000 ft), and 18 ft deep -  
 cut across ridge - similar to  
 this - nodules, cleavage, etc., but  
 I could not find even a fragment  
 of a shell.

at 2151.9 - a long cut, over 400 ft,  
 on rather gentle slope down to south  
 (this is just after road turn S.)  
 The E. side is better - much

2150.0  
 2145.2  
 4.8

Culture Foreman

J. D. Schorr. A.P. #8 Hawarden  
 (Lake View Camp) V.C.C.

Harry Hansen - same  
 engineer in charge of side camp

Hamilton - (Hamilton)

Lieut. R. O. Haas

Hawarden, Ia - (for a mo.)

17 ft  
 This is a heavier yellow  
 brown with some round nodules  
 A good cut at 2158.9 but no fossils, nor  
 all as far in <sup>monocline</sup> <sup>module</sup>  
 the cuts in Cranston Co. are over 2000 ft.  
 but most have (evidently) a gray brown  
 below (2.5 ft.) as shown by vegetation  
 I cut into one & found many more  
 nodules many cuts.  
 at 2174.2 - big cut over 400 ft. - 18 ft deep -  
 over 2000 - gray brown 4-5 ft. - below, somewhat brown  
 yellow

Gray brown  
 becoming more  
 brown and  
 sandy

Chocolate brown



299, 4

Miss Agnes Hansen, 817, 1<sup>st</sup> St. S.W.  
Rochester, Minn.

Mr L. B. Wells  
Wagon, Ill. -

Miss Edwina Heckwolf - (Moll)  
6944 Oleatha Ave. St. Louis, Mo.

Mr. A. N. Carter <sup>James T. P.</sup>  
Fremont, Iowa. <sup>5. 2. P.</sup>

Rose

Fall skin, no. - faint, 45 yrs. old. Not  
clean-cut - Dark goggles on forehead.

Carter

Dark, smooth, bold, no mustache 35 yrs. old.



299,

Miss Agnes H. W. - open 345

Ross S. E. corner 265

Mr. L. B. S. W. open 295

Wagon NW corner 215

Miss Edna rectory

6944 Oleatha Ave. St. Louis Mo

Mr. A. N. Carter

Wagon rectory  
S. E. corner

Fremont, Iowa

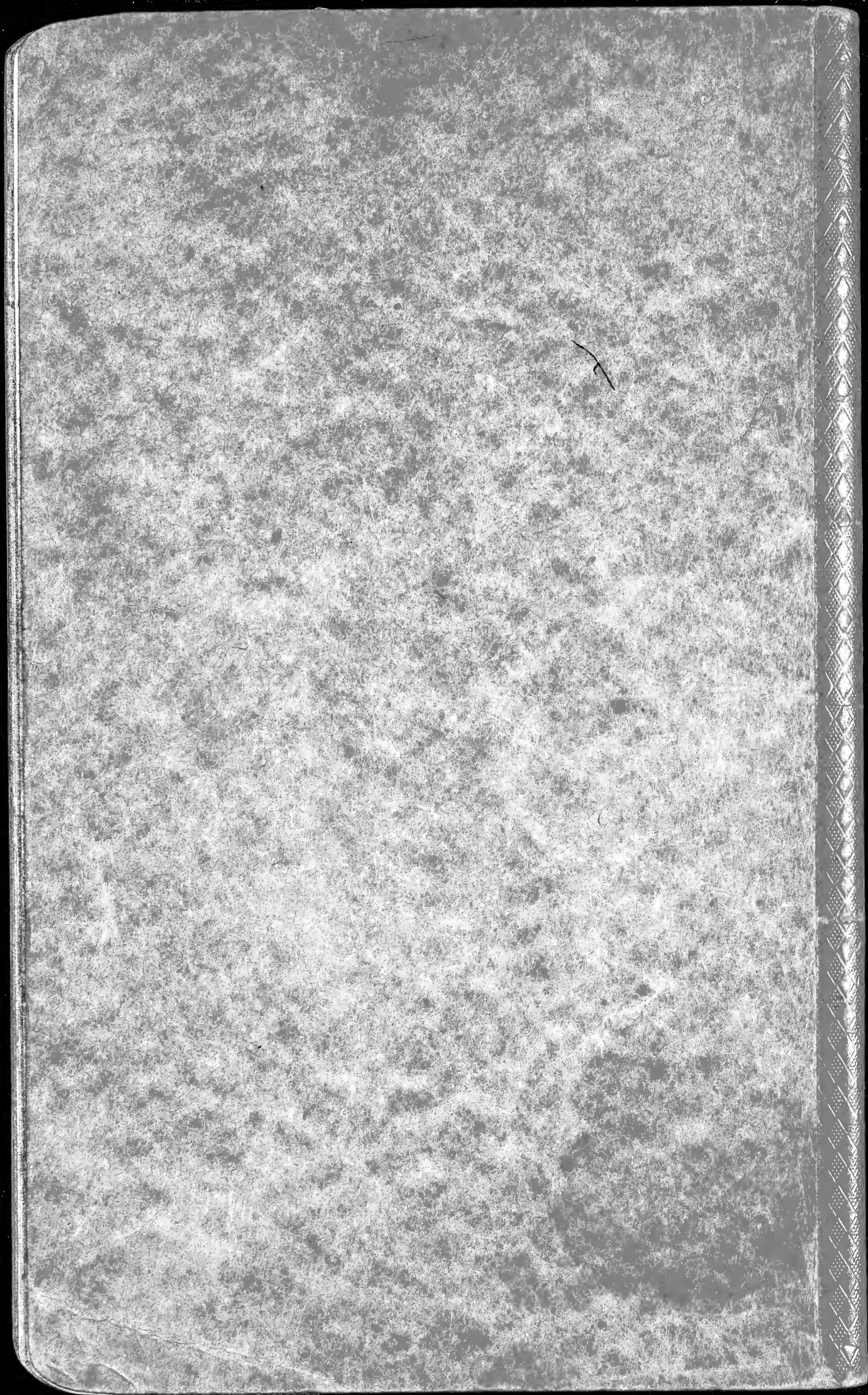
Rose

Full skin, red-faced, 45 yrs. old. No  
clean-cut - Dark goggles on forehead.

Carter

Dark, swarthy, bold, no mustache 35 yrs







Direct  
 Iowa City to  
 Lyle 188  
 Minneapolis 111  
 Bemidji 224  
523

Iowa City  
 St. Paul 297  
 Rock Creek 61  
 Brainerd 110  
 Bemidji 98  
566

Return  
 Bemidji to  
 Spirit Lake 347-  
 To Canton turn 110  
 Sioux City 71 } 374  
 Iowa City 293

Farther 43

130  
 61  
191  
 110

Tue. Monday home,  
 Monday P.M. - George  
 Tuesday - Rock Creek (172)  
 + Wed - Brainerd (110)  
 Th. Fri. - DeWey's

Friday (what) - Spirit Lake  
 Sat. (or Sun) Lab. + To Dak.

Sun (or Mon) - Home

Tue Tues - To Rock Creek

Wed. - To Bemidji

Th. Fri. - DeWey's

Sat. - Spirit Lake

Sun. - To, Dak.

Mon. - Home

Iowa City to  
 Cedar Rapids 27  
 Osage 137  
 Lyle 22 186  
 To Minneapolis 111 - 297  
 To Bemidji via Brainerd 224  
Total 521 mi

Sioux City To  
 Denison 74  
 Carroll 21  
 Jefferson 30  
 Ames 41  
 Marshalltown 38  
 Tama 23  
 Belle Plaine 18  
 Marquette 17  
 Iowa City 31  
293

Iowa City to  
 Ames 127  
 Garner 75  
 Spencer 84  
 Spirit Lake 21  
307

Iowa City to  
 Lyle 188  
 St. Paul 111  
 Rock River 61  
 Brainerd 110  
 Bemidji 98  
Total 568  
 Farther 521  
 47

Iowa City to  
 Marquette 31  
 Belle Plaine 17  
 Tama 18  
 Marshalltown 23  
 Ames 38  
 Jefferson 41  
 Carroll 30  
 Denison 21  
 Sioux City 74 - 293

Iowa City to  
 Co. Bluffs 276  
 Graceland 3  
 Lincoln 70  
 Fairmont 59  
 Belleville, Kas 62  
470  
 To Phillipsburg, Kas. 94

Bemidji to  
 Sank Center 149  
 Hillman 53  
 Windom 95  
 Spirit Lake, Ia. 50  
347

Spirit Lake to  
 Canton turn 110  
 Sioux City 71  
 Iowa City 293  
474  
 293  
 42  
251

ad 4 21 - Zamarand swamp  
 Zamarand  
 Black Horse  
 Jack Horse (H)

Windom 100  
 Jack 23  
 41  
164

Small Lake 416.9  
 A Shell, Burlington  
 State Mount  
 Dec. 6 - 7. 145  
 Lydick Lake  
 420.4 - Canyon Lake

Yankston to Belleville, Kas. 246 mi.  
 Co. Bluffs to Denison 138 mi.